SAMSUNG TECHWIN

High Resolution 37x Weatherproof Camera

User Manual

SCO-2370

SAMSUNG

High Resolution 37x Weatherproof Camera
User Manual

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Warranty

If the product does not operate properly in normal conditions, please let us know. Samsung Techwin will resolve the problem for free of charge. The warranty period is 3 years. However, the followings are excluded:

- If the system behaves abnormally because you run a program irrelevant to the system operation.
- Deteriorated performance or natural worn-out in process of time

Before operating the camera, confirm the camera model and correct input power voltage.
To help you understand this manual thoroughly, we'll introduce our model description.

■ SCO-2370 SERIES

- NTSC MODEL
  SCO-2370N
- PAL MODEL
  SCO-2370P

■ MODEL DESCRIPTION

- SCZ-2370X

- SIGNAL SYSTEM
  N → NTSC MODEL
  P → PAL MODEL

safety information

CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

WARNING

- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.
- To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.
3. Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.
4. Securely plug the power cord into the power receptacle. Insecure connection may cause fire.
5. When installing the camera, fasten it securely and firmly. The fall of camera may cause personal injury.
6. Do not place conductive objects (e.g. screwdrivers, coins, metal parts, etc.) or containers filled with water on top of the camera. Doing so may cause personal injury due to fire, electric shock, or falling objects.

7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.
8. If any unusual smells or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way. (SAMSUNG is not liable for problems caused by unauthorized modifications or attempted repair.)
10. When cleaning, do not spray water directly onto parts of the product. Doing so may cause fire or electric shock.

CAUTION

1. Do not drop objects on the product or apply strong blows to it. Keep away from a location subject to excessive vibration or magnetic interference.
2. Do not install in a location subject to high temperature (over 50°C), low temperature (below -50°F), or high humidity. Doing so may cause fire or electric shock.
3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.
4. Remove the power plug from the outlet when there is a lighting storm. Neglecting to do so may cause fire or damage to the product.
5. Keep out of direct sunlight and heat radiation sources. It may cause fire.
6. Install it in a place with good ventilation.
7. Avoid aiming the camera directly towards extremely bright objects such as sun, as this may damage the CCD image sensor.
8. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
9. The Mains plug is used as a disconnect device and shall stay readily operable at any time.
10. Do not expose the camera to radioactivity. Radioactivity exposure may damage the CCD.

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions :

1) This device may not cause harmful interference, and
2) This device must accept any interference received including interference that may cause undesired operation.

CAUTION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

IC Compliance Notice

This Class A digital apparatus meets all requirements of the Canadian Interference.-Causing Equipment Regulations of ICES-003.

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

important safety instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Clean only with dry cloth.
6. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
8. Do not defeat the safety purpose of the polarized or grounding-type plug.
   A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. Only use attachments/accessories specified by the manufacturer.
11. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
12. Unplug this apparatus during lightning storms or when unused for long periods of time. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus

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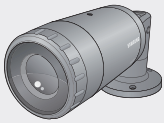
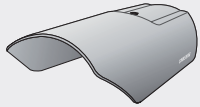
FEATURES

- **37x Optical Zoom**
  The built-in SCO-2370 optical zoom lens is a highly durable component. It features auto focus, auto iris, and zoom functions.
- **High Resolution**
  By adopting a diagonal 1/4" 410,000 (NTSC) pixel, 470,000(PAL) pixel SONY CCD, the camera produces clear picture quality with a horizontal resolution of 600TV lines for color and a horizontal resolution of 700TV lines for BW mode.
- **SSNR3 (Samsung Super Noise Reduction) Function**
  The high-performance W-V DSP chip effectively removes low-light gain noise and ghosting to provide clear images even in dark environments.
- **DAY&NIGHT(ICR)**
  This camera has a function that automatically selects the mode that is appropriate for daytime or night-time conditions.
  The COLOR mode operates in daytime conditions to provide optimum colors, and BW mode operates in night-time conditions to enhance the definition of the image.
- **IP68 Approved/Dust and Rain Resistant**
  With dust and rain resistant design, the camera can be installed outside under building eaves or places that are exposed to the dust and rain.
- **SSDR (Samsung Super Dynamic Range)**
  For images with high contrast between bright and dark Areas from difficult lighting conditions such as backlighting, this camera selectively illuminates darker Areas while retaining the same light level for brighter Areas to even out the overall brightness.
- **Communication**
  RS-485, Coaxial communication methods are supported.
  - RS-485 Communications : SAMSUNG-T, SAMSUNG-E, Pelco-P, Pelco-D, Vicon, Panasonic, Bosch, Honeywell, AD
  - Coaxial Communications : Pelco Coaxitron
- **Temperature control**
  The built-in heater & fan enables normal operation under a severe condition of -50°C.
- **OSD**
  The camera's OSD is complimented by 18 foreign languages.
  - NTSC : Korean, English, French, Spanish, Japanese, Portuguese, Taiwanese
  - PAL : English, French, German, Spanish, Italian, Chinese, Russian, Czech, Polish, Portuguese, Romanian, Serbian, Swedish, Danish, Turkish

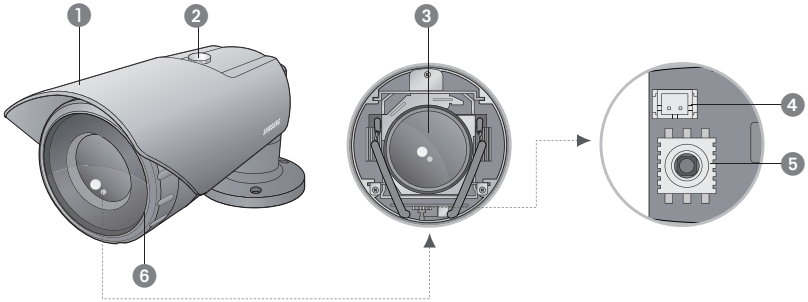
WHAT'S INCLUDED

Check if the following items are included in the product package.

		L
SCO-2370	Sunshield	L-type hexagon wrenches (4.0mm)
Sunshield Adaptor (1EA)	Tapping Screw (3EA)	User Guide
Quick Set-up Guide	Installation Video Output Cable	

COMPONENT NAMES AND FUNCTIONS

Front



❶ **Camera Sunshield**

❷ **Sunshield adaptor** : Fixing the sunshield onto the camera.

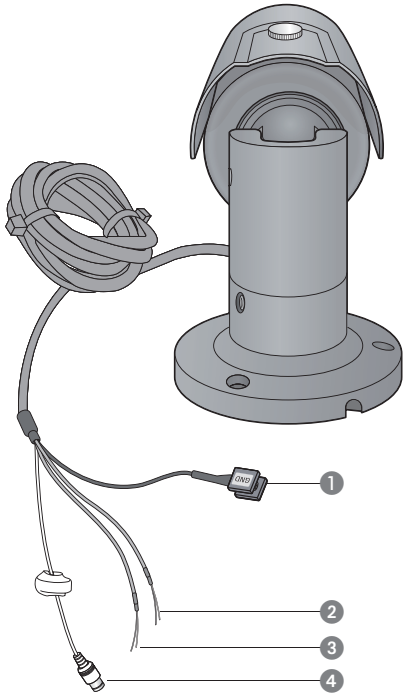
❸ **Lens**

❹ **Video Output Terminal to Monitor** : Used for monitoring of video output When camera installation.

❺ **Function Setup Switch** : Display the menu on the screen and move the cursor to four directions to confirm status or after changing a selected item.

❻ **Front cover**

Back



❶ **Power input terminal** : Connect the power as specified for each model here.

❷ **MD Output Terminal** : Motion detection signals are output through this terminal.

❸ **RS-485 control terminal** : You can control SETUP MENU through this port by using external controllers like a Remote controller that RS-485 Communication is supported. For details, see page 16.

❹ **Video output terminal** : Video signals are output through this port. Connect this port to the Video IN port of a monitor.

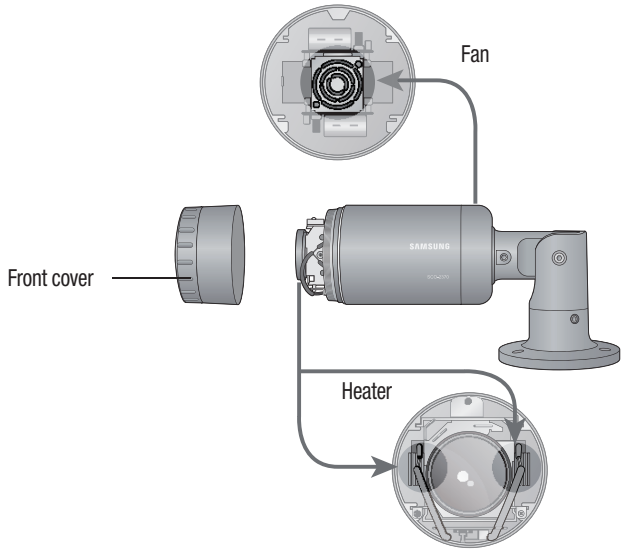
Connector	Signal Level	I/O
MD	0V (There is no motion) ⌊ 5±0.5sec ⌋ USER Vcc (There is motion)	Output

- MD(Motion Detection) Output format is open collector.

COMPONENT NAMES AND FUNCTIONS

Heater & Fan

This product is equipped with built-in heater & fan, and capable of maintaining appropriate internal temperature as well as defrosting and dehumidification.



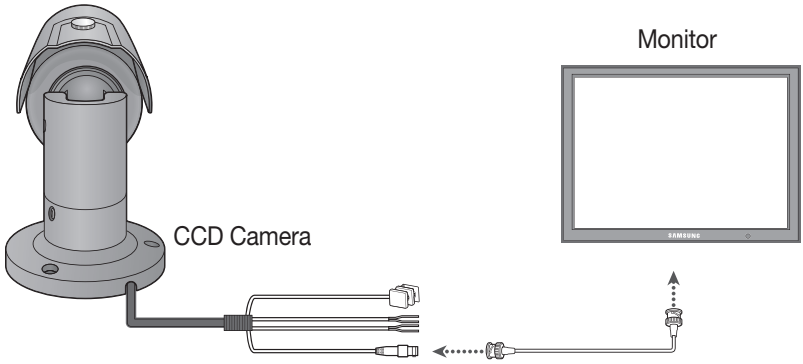
1. While powered, the heater operates according to the camera's internal temperature. (Note that the fan always operates if powered.)

- While the camera is powered, the heater operates if its internal temperature drops below 0 °C. When the camera's internal temperature reaches 10 °C, the heater stops operating.
- Camera's internal temperature is within -50°C ~ -10°C, the message "Low Temperature Wait" appears on the black background. The camera initializes and outputs video signal once it gets above -10°C.

- Be careful not to touch the heater while installing if the ambient temperature is below than -10°C, since the heater may operate immediately after applying the power.
- If the front cover is cross threaded or not correctly tightened the camera housing will not be weatherproof.
- When you combine the front cover, combine the triangle of front cover and triangle of main body confront each other.
- Frost can be found if the camera is left under -10°C and then powered, and the frost will be removed automatically in about 3 hours.
- The camera will be initialized if its internal temperature becomes 80°C or higher.

CONNECTING TO MONITOR

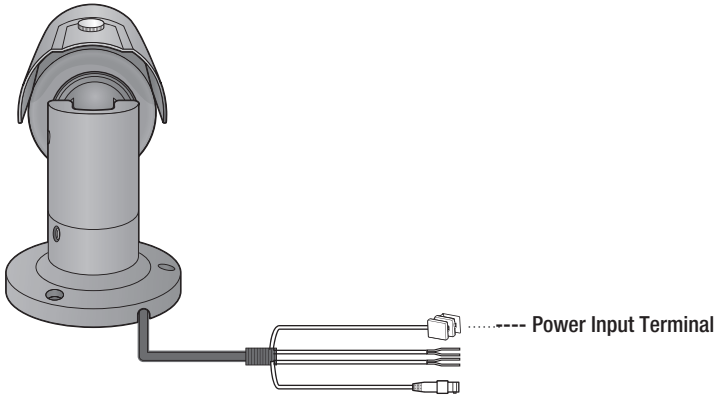
Please connect the video output terminal located on the back of the camera to the monitor.



- The connection method varies depending on the type of monitor and accessories.Please refer to the user's manual for each instrument.
- Please turn off the power when connecting.

CONNECTING TO POWER

The recommended adaptor specification for SCO-2370N/P is AC 24V/1.5A over.
Please check the standard power requirement before connecting the power.



When the resistance value of copper wire is at [20°C(68°F)]

Copper wire size(AWG)	#24(0.22mm²)	#22(0.33mm²)	#20(0.52mm²)	#18(0.83mm²)
Resistance value(Ω/m)	0.078	0.050	0.030	0.018
Voltage drop(V/m)	0.028	0.018	0.011	0.006

- As shown in the table above, voltage decreases as the wire gets longer. Therefore having an excessively long distance between the power adaptor and the camera may affect the camera's performance.

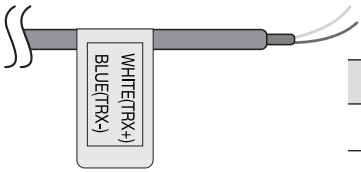
✳ Standard voltage for camera operation : DC 12V±10% / AC 24V±10%

✳ There may be some deviation in voltage drop depending on the type of wire and the manufacturer.

- Please use a power adaptor that meets the required standards.
- Please connect the power after installation.

RS-485 COMMUNICATION CONTROL

Connecting to RS-485 Control Cable



CONTROL CABLE	SPEC
WHITE	RS-485+
BLUE	RS-485-

Using RS-485 communication will enable you to control the OSD menu from a SAMSUNG TECHWIN System Controller or DVR.

(1) **Connection to a PC.**
Connect the camera to the PC via a RS-485 converter using RS-485 and a serial cable.
EX) SERIAL PORT OF THE PC(COM1) → SERIAL CABLE → RS-485 CONVERTER → RS-485 CONTROL CABLE

(2) **Connection to a DVR or System Controller.**
Connect the RS-485 cable to the connection ports of the DVR or System Controller.

485 Control Board Connection Port	RS-485 Control Port
(+) CONNECTION TERMINAL	WHITE (TRX+)
(-) CONNECTION TERMINAL	BLUE (TRX-)

* RS-485 Communication establishment initial value

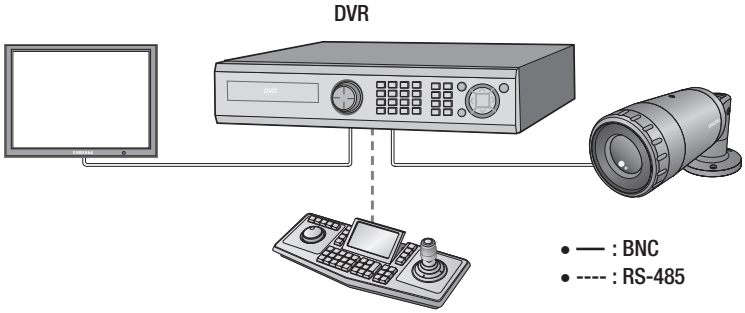
Item	Camera ID	BAUD RATE	UART MODE	RET PKT
Initial value	1	9600	8-NONE-1	DISABLE

- When making a control system to control the camera, please use to the protocol(SAMSUNG-T, SAMSUNG-E, PELCO-P, PELCO-D, VICON, PANASONIC, BOSCH, HONEYELL, AD).
- When you connecting to RS-485 CONTROL TERMINAL, please peel off the outer skin inside the RS-485 CONTROL TERMINAL.

USING COAXIAL COMMUNICATIONS

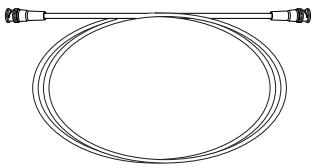
- Coaxial Communications System
- OSD Control method

CAMERA	DVR	CONTROLLER
SET	MENU/ENTER	OSD KEY
UP	UP KEY	JOYSTICK UP
DOWN	DOWN KEY	JOYSTICK DOWN
LEFT	LEFT KEY	JOYSTICK LEFT
RIGHT	RIGHT KEY	JOYSTICK RIGHT



- Video Cable

The camera's video output port is connected to the monitor with a BNC coaxial cable, shown below : If the distance between the camera and the monitor exceeds the recommended maximum, please use an auxiliary video amp.



Distance	Recommended Cable Specification
300m	3C2V(RG-59/U)
450m	5C2V(RG-6/U)
600m	7C2V(RG-11/U)

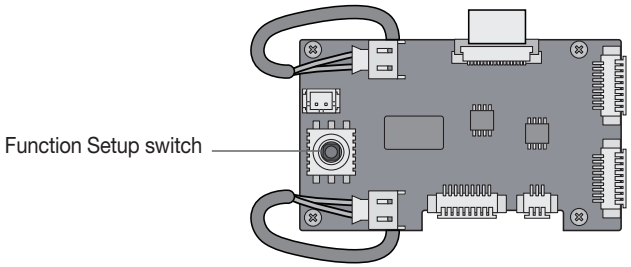
■ If the camera is controlled through coaxial communication, please use a video amp intended for coaxial communications. Regular video amps do not transfer coaxial signals.

MENU CONFIGURATION

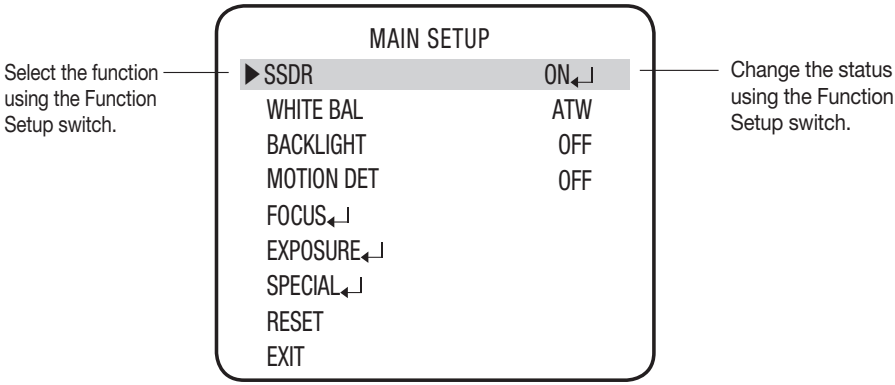
MAIN SETUP MENU			
SSDR	● OFF	● ON	
WHITE BAL	● ATW ● OUTDOOR	● MANUAL ● INDOOR	● AWC → SET
BACKLIGHT	● OFF	● BLC	● HLC
MOTION DET	● OFF	● ON	
FOCUS ↵	● MODE ● D-ZOOM ● LENS INIT	● ZOOM TRACK ● ZOOM POS INIT ● RETURN	● ZOOM SPEED ● USER PRESET
EXPOSURE ↵	● BRIGHTNESS ● AGC ● RETURN	● IRIS ● SSNR3	● SHUTTER ● SENS-UP
SPECIAL ↵	● PRIVACY ● SYNC ● MONITOR	● DAY/NIGHT ● COMM ADJ ● DISPLAY	● DIS ● IMAGE ADJ ● RETURN
RESET			
EXIT			

MENU SETUP

Use the Function Setup switch within the camera.



1. Press the Function Setup switch for 2 seconds. (Short-pressing the Function Setup Switch activates the AUTO FOCUS).
   - Main setup menu is displayed on the monitor screen.



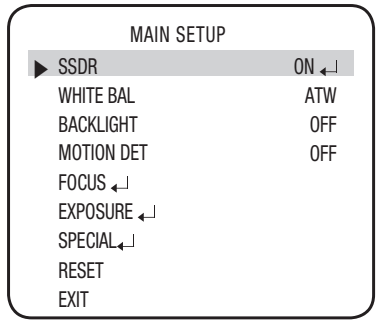
2. Select the desired feature using the Function Setup switch.
   - Each pressing of the Function Setup switch moves the indicator to the next or previous feature.
   - Move the arrow indicator to the desired feature item.
3. Change the status of the selected feature using the Function Setup switch.
4. When completed, move the arrow indicator to 'EXIT' and press the Function Setup switch.

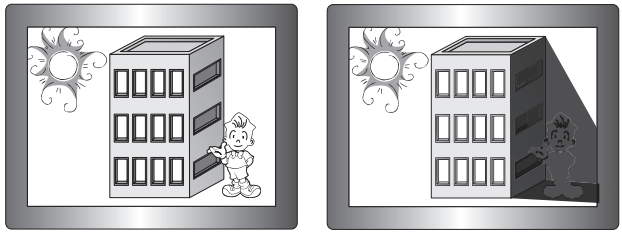
- Features marked with a ↵ have an accessible submenu.
- An item with the - - - icon is unavailable due to function settings.

SSDR (Samsung Super Dynamic Range)

SSDR illuminates darker spots of an image while retaining the same light level for brighter spots to even out the overall brightness of images with high contrast between bright and dark spots.

1. When the SETUP menu screen is displayed, select 'SSDR' by using the Function Setup switch so that the arrow indicates 'SSDR'.
2. Use the switch to change the SSDR level according to the contrast between bright and dark areas.



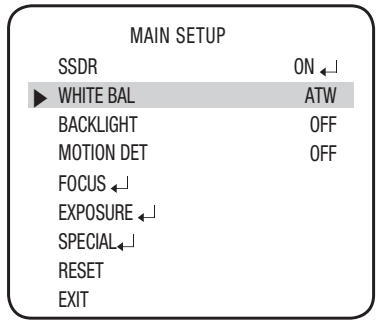


SSDR ON SSDR OFF

White Balance (WHITE BAL)

Use the White Balance function to adjust the screen color.

1. When the SETUP menu screen is displayed, select 'WHITE BAL' by using the Function Setup switch so that the arrow indicates 'WHITE BAL'.
2. Select a desired mode using the Function Setup switch.



- Select one of the following 5 modes, as appropriate for your purpose.
  - ATW : Select this when the color temperature is between 1,800°K and 10,500°K.
  - MANUAL : Select this to fine-tune White Balance manually. Set White Balance first by using the ATW or AWC mode. After that switch to MANUAL mode, fine-tune the White Balance and then press the Function Setup switch.
  - AWC→SET : To find the optimal luminance level for the current environment, point the camera towards a sheet of white paper and press the Function Setup switch. If the environment changes, readjust it.
  - OUTDOOR : Select this when the color temperature is between 1,700°K and 11,000°K. (sodium light inclusion)
  - INDOOR : Select this when the color temperature is between 4,500°K and 8,500°K.

▪ White Balance may not work properly under the following conditions. In this case select the AWC mode.

❶ When the color temperature of the environment surrounding the subject is out of the control range (e.g. clear sky or sunset).

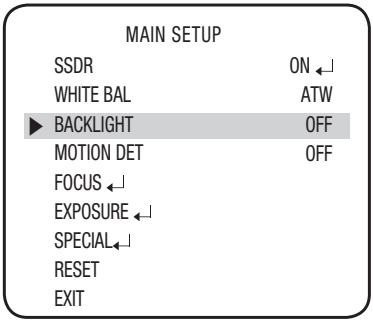
❷ When the ambient illumination of the subject is dim.

❸ If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, the White Balance operation may become unstable.

BACKLIGHT

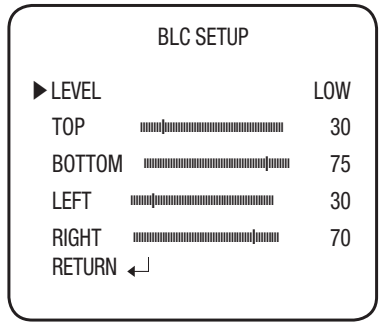
Unlike conventional cameras, the SCO-2370 is designed to deliver a distinctive subject and background at the same time, even when the subject is backlight, by using the features of the proprietary W-V DSP chip.

1. When the SETUP menu screen is displayed, select 'BACKLIGHT' by using the Function Setup switch so that the arrow indicates 'BACKLIGHT'.



2. Select a desired mode using the Function Setup switch depending on the camera purpose.

   - **OFF** : Not being used
   - **BLC** : Enables a user to directly select a desired area from a picture, and to view the area more clearly.
   - **HLC** (HIGH LIGHT COMPENSATION) : If the scene contains extremely bright light areas such as; from car headlight, the light can mask out much of the on-screen detail.
     - LEVEL : Adjust level of the HLC function. (LOW,MIDDLE,HIGH)
     - MASK TONE : Change the brightness

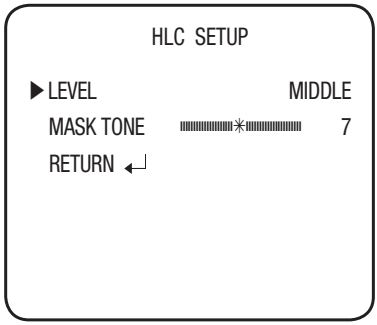


3. Select a desired mode using the Function Setup switch and press the Function Setup switch.

   - Select 'BLC' to adjust the area to be enhanced then adjust the level.

- Since the following symptoms may occur according to the ambient illumination when BLC is selected, set it to OFF.
  ❶ Color or screen changes unnaturally.
  ❷ Noise appears in the bright part of the screen.
- Since the performance of the BLC function may be affected by the area of the bright part of the screen, optimize the installation angle for the best BLC performance.
- If you increase LIMIT, the screen display may be distorted.
- For high performance of BLC function, We recommend that you set IRIS to AUTO in the EXPOSURE setup.
- Activating BLC may cause the camera to repeat the Auto Focus operation depending on lighting conditions. It is recommended that you use the Focus Setup menu in One-Push or Manual mode.
- Smart Zoom and BLC cannot be used in conjunction with each other:
- Setting up Smart Zoom and then BLC automatically cancels Smart Zoom.

- **HLC** : Enable the user to change the level, mask tone area.

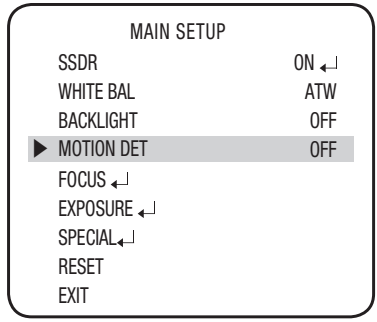


- For effective viewing of license plates, there is a minimum required illumination and the shutter speed needs to be faster than 1/200sec.
- Because there can be a difference in the effectiveness of HLC according to the amount of light area in the screen, optimize the installation angle for the best HLC performance.
- When dark, the HLC is only activated when a bright light exceeding a specific size. (In NIGHT ONLY mode.)
- The HLC is not activated in day light or when bright light is not present at night. (In NIGHT ONLY mode.)
- The HLC is not activated when the D-ZOOM mode is 'ON' or DIS mode is 'ON'.

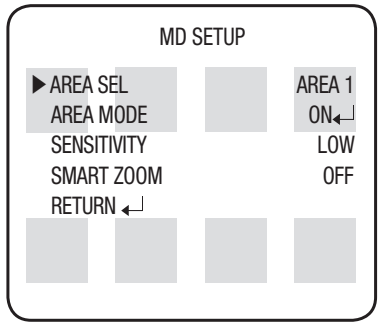
MOTION DETECTION

This product has a feature that will detect movements of objects in 8 different areas on the screen. The camera detects an object's movement by sensing disparity of outline, brightness levels and color. The camera sends a detection signal out via the MD output terminal and will zoom into a pre-determined point.

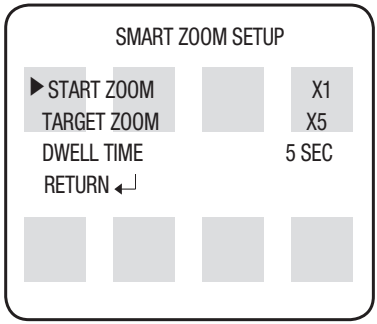
1. When the SETUP menu screen is displayed, select 'MOTION DETECTION' by using the Function Setup switch so that the arrow indicates 'MOTION DETECTION'.



- **OFF** : MOTION DETECTION mode is cancelled.
- **ON** : Any motion in the selected areas is observed.
  - AREA SEL : You can select the area you wish to observe from the 8 area.
  - AREA MODE : Determines whether to use the MD area selected in SENSITIVITY
  - SENSITIVITY : You can select low or high level. When SENSITIVITY is high, motion detection sensitivity is increased to recognize even small movement
  - SMART ZOOM : Smart zoom is operated in connection with MOTION DETECTION. When the SMART ZOOM function is 'ON' while the MOTION DETECTION mode is 'ON', the zoom goes to the TARGET ZOOM position once motion is detected. Once the zoom action is finished and 'DWELL TIME' has passed, the zoom returns to the 'SMART ZOOM' position.



- **START ZOOM** : By moving the Function Setup switch in the 'SMART ZOOM' item to select the zoom position from 1x to 37x to be returned after the 'SMART ZOOM' action is over.
- **TARGET ZOOM** : Use the Function Setup switch in the 'TARGET ZOOM' item to select the zoom position from 1x to 37x to be used during MOTION DETECTION.
- **DWELL TIME** : Use the Function Setup switch in the 'DWELL TIME' item to select a time between 5 and 60 seconds for the dwell time before the zoom is returned to the 'SMART ZOOM' position. (5,7,10,15,20,30,40,60 sec)



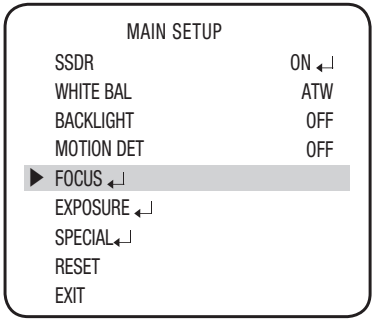
Tips on Using the Motion Detection Feature

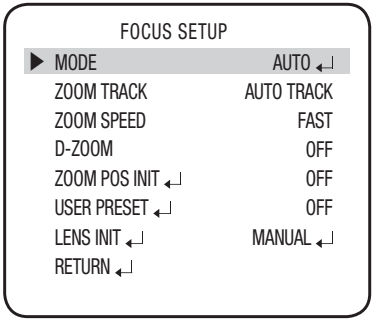
- The feature may not function properly under flickering light conditions.
- The camera interprets sudden changes in lighting and subsequent change in brightness of an object as motion.
- With the feature enabled, other algorithms may require additional time to operate.
- This system does not guarantee prevention of fire or theft. The manufacturer shall not be held responsible for any accident or damage incurred.

FOCUS

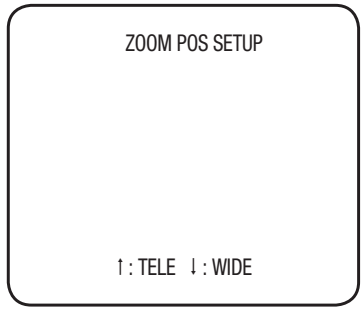
1. Press the Function Setup switch to access the main setup menu and then position the indicator over FOCUS using the Function Setup switch.
2. Press the Function Setup switch.

- **MODE** : You can select the most suitable zoom mode. Move the arrow indicator to 'MODE' using Function Setup switch.

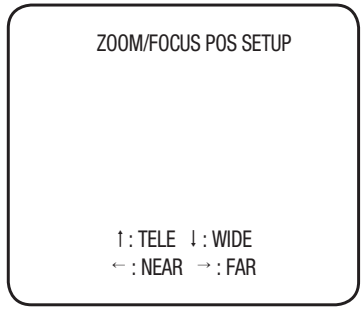




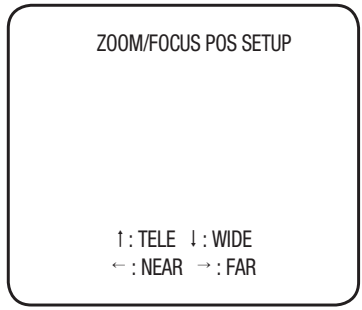
- AUTO : Select AUTO and press the Function Setup switch to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the Function Setup switch while verifying the changes on screen. Enabling D-ZOOM (ON) means that digital zoom will activate once optical zoom ends. The focus automatically adjusts when the lens zooms in and out.



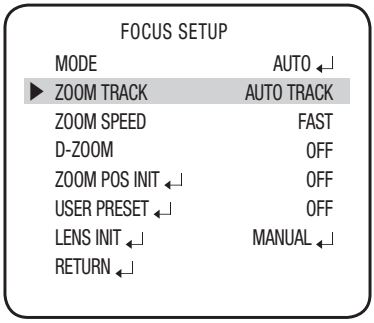
- ONE PUSH : Focus is automatically adjusted just once, after zoom position is changed. Select 'ONE PUSH' and the Function Setup switch to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the directional key of Function Setup Switch while verifying the changes on screen. Press the Function Setup switch once the desired image quality is obtained.



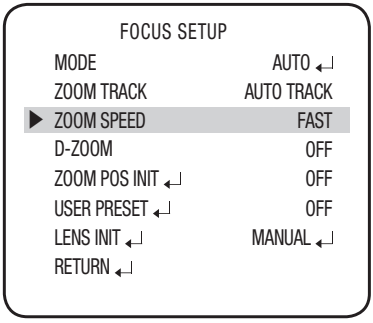
- MANUAL : Select 'MANUAL' and press the Function Setup switch to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions moving directional key of Function Setup Switch while verifying the changes on screen. Press the Function Setup switch once desired image quality is obtained. Focus can be manually adjusted, independent of moving zoom.



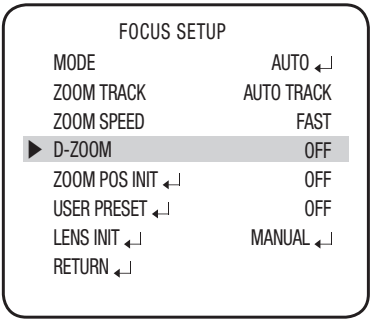
- **ZOOM TRACK** : Select 'ON' for the 'SMART ZOOM' item in the MOTION DETECTION menu and press Function Setup switch to change the settings for the 'SMART ZOOM' function.
  Use the Function Setup switch in the 'ZOOM' item to select 'AUTOTRACK' or 'TRACK' and press Function Setup switch to activate the zoom action focus function.
  - AUTO TRACK : Zooming in while deciding or adjusting the status of the focus.
  - TRACK : The camera moves the focus track which is established.
  - OFF : Only the zoom lens moves.

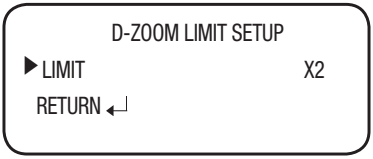


- **ZOOM SPEED** : Configure zoom tracing speed using this feature. Position the indicator over 'ZOOM SPEED' using the Function Setup switch and then set to desired mode using the Function Setup switch.
  - FAST : To move zoom fast.
  - SLOW : To move zoom slowly.
  - MEDIUM : To move zoom at medium speed.



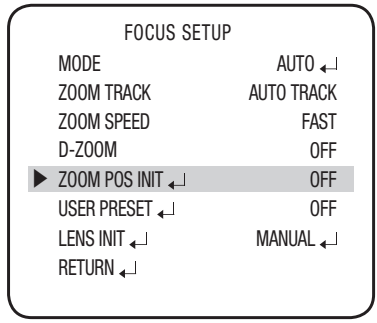
- **D-ZOOM** : Configure magnification limit from x2~x16 using this feature. Position the indicator over 'D-ZOOM' using the Function Setup switch Set 'D-ZOOM' to 'ON' and press the Function Setup switch to confirm.
  - Set 'ZOOM LIMIT' to the desired level using the Function Setup switch.





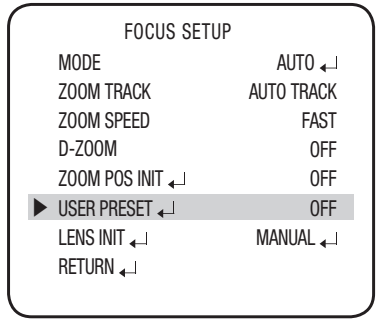
▪ When the DIS is enabled, you cannot use the D-ZOOM.

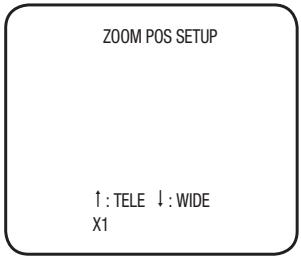
- **ZOOM POS INIT** : Moves to the controlled ZOOM position when the power is truned on and the initial ZOOM position has been set.
  - AUTO : If you turn the power off and on, the zoom magnification level is set to the previous level that was set before the power went off.
  - MANUAL : The zoom magnification level can be set from 1x to 37X.

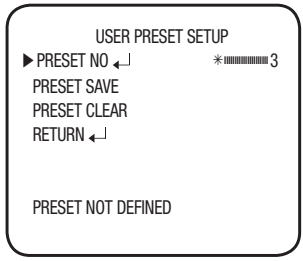


■ The zoom postion is saved after 5 seconds when you set zoom function.

- **USER PRESET** : Preset user-designated configurations using this feature. Position the indicator over 'USER PRESET' using the Function Setup switch and then set to 'ON' using the Function Setup switch. Press the Function Setup switch to confirm.
  - PRESET NO : Up to 128 preset configuratons are supported.
  - PRESET SAVE : Save configured preset.
  - PRESET CLEAR : Clear configured preset.
  - RETURN : Revert to the FOCUS SETUP menu.



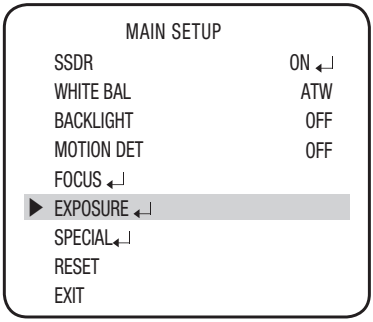




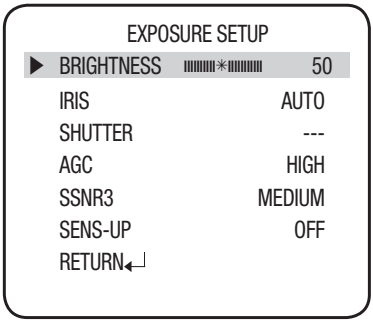
- **LENS INIT** : Use the Function Setup switch in the 'Lens initialization' item select 'AUTO' or 'MANUAL' and then press the Function Setup switch.
  - AUTO : Initialize the lens by setting the date. Initializing time can be set to 1 ~ 7 days, and the lens is initialized at the specified time interval since the setting.
  - MANUAL : The Lens will reset when you press the Function Setup switch.

EXPOSURE

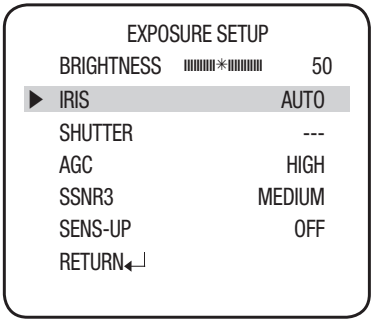
1. Press the Function Setup switch to access the main setup menu and then position the indicator over 'EXPOSURE' using the Function Setup switch.
2. Press the Function Setup switch to confirm.

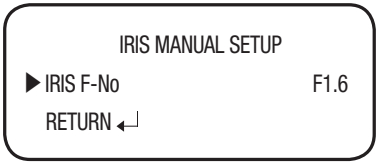


- **BR IGHTNESS** : Use this feature to adjust image brightness. Position the indicator over 'BRIGHTNESS' using the Function Setup switch. Then increase or decrease brightness level using the Function Setup switch while verifying the changes on screen. Set END once desired level is obtained.



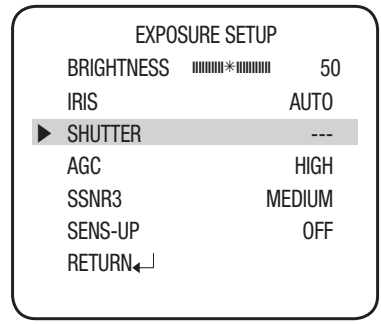
- **IRIS** : Set 'IRIS' to 'AUTO' or 'MANUAL'. Position the indicator over 'IRIS' using the Function Setup switch and then select the desired iris mode using the Function Setup switch.
  - AUTO : The iris is automatically activated upon illumination.
  - MANUAL : Manual iris configuration. Set 'IRIS' to 'MANUAL' using the Function Setup switch and then press the Function Setup switch. Increase or decrease iris level using the Function Setup switch while verifying the changes on screen.

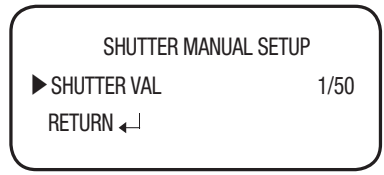




- **SHUTTER** : Control image brightness by adjusting shutter speed.
  ❶ Position the indicator over 'SHUTTER' using the Function Setup switch. Then select the desired shutter mode (A.FLK, ESC, MANUAL) using the Function Setup switch.
  - MANUAL : Manual shutter speed setting.
  - A.FLK (NTSC: 1/100, PAL: 1/120) : Flicker-free mode.
  - ESC : Automatic shutter speed setting (optimal).
    Auto operation is possible only when the IRIS is set to MANUAL.

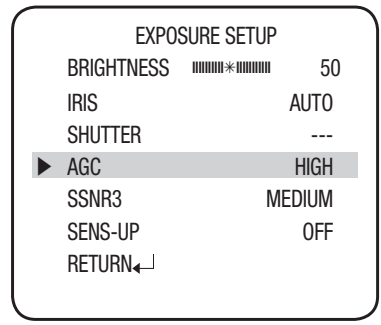
  ❷ Position the indicator over 'SHUTTER' using the Function Setup switch. Then select the desired shutter mode (A.FLK, ESC, MANUAL) using the Function Setup switch.
  ❸ Press the Function Setup switch to complete.

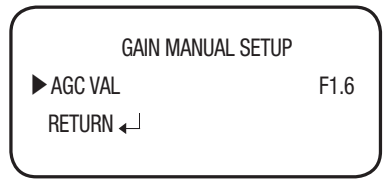




- Image may become unstable if the camera is set to 'ESC' mode and faces a strong fluorescent light.
- Under 'ESC' mode, the brightness can be adjusted using the Function Setup switch.

- **AGC** (Auto Gain Control) : For brighter images.
  ❶ Position the indicator over 'AGC' using the Function Setup switch.
  ❷ Set 'AGC' to the desired mode using the Function Setup switch.
  - HIGH : Wide range gain value adjustment
  - MANUAL : Selecting gain value range. (5dB ~ 41dB)
  - OFF : Disabled
  - LOW : Narrow range gain value adjustment
  - MEDIUM : MEDIUM range gain value adjustment

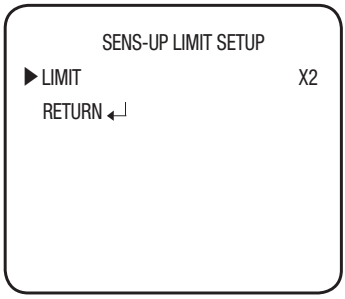




- **SSNR3** (Samsung Super Noise Reduction): On screen noise reduction.
  - LOW : Low noise reduction
  - MEDIUM : Medium noise reduction
  - HIGH : High noise reduction
  - OFF : Disabled

- Changing the 'AGC' setting from LOW to HIGH results in greater sensitivity, as well as on screen noise.
- Setting 'AGC' to OFF locks 'SSNR3' configuration.

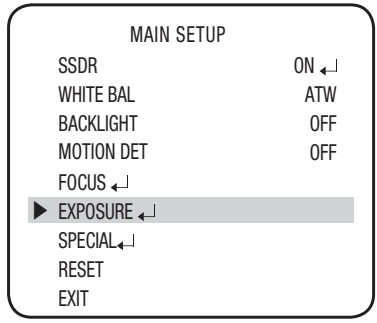
- **SENS-UP** : This feature ensures clear images at night or under low light conditions.
  ❶ Position the indicator over 'SENS-UP' using the Function Setup switch.
  ❷ Set 'SENS-UP' to the desired mode using the Function Setup switch.
  - AUTO : Select this mode for use in night time or under low light conditions.
  - OFF : Disabled



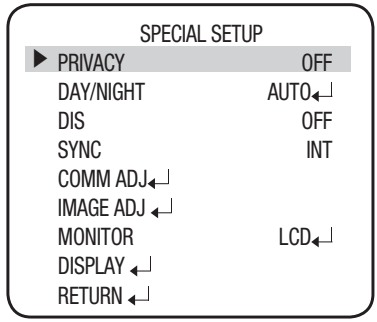
- Once 'AUTO' mode is set, the user can configure the SENS-UP limit by increasing/decreasing the shutter speed (e.g.: X2, X4..... X32, X64, X128, X256, X512).
- The bigger ratio setting brightens darker area, but it may blur image of moving object and the Auto Focus may not appear to be optimal.

SPECIAL

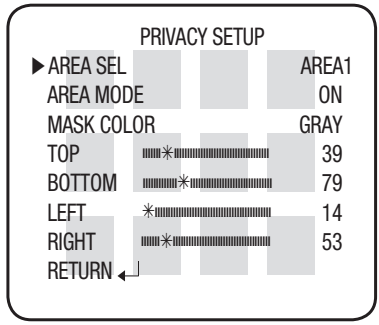
1. Press the Function Setup switch to access the main setup menu and then position the indicator over 'EXPOSURE' using the Function Setup switch.
2. Press the Function Setup switch to confirm.



- **PRIVACY** : Hide an area you want to hide on the screen.
  - ❶ When the SPECIAL menu screen is displayed, using the Function Setup switch so that the arrow indicates 'PRIVACY'.
  - ❷ Set up the mode using the 4 direction buttons..



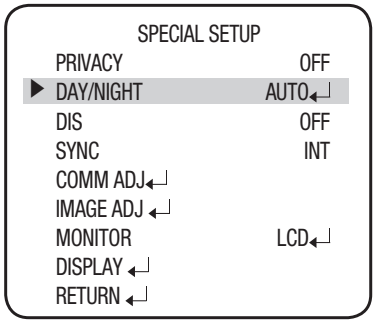
- AREA SEL : You can select up to 12 areas.
- AREA MODE : Determines whether to use the area selected in the AREA SEL.
- MASK COLOR : Determine area color. You can select Green, Red, Blue, Black, White, Gray.



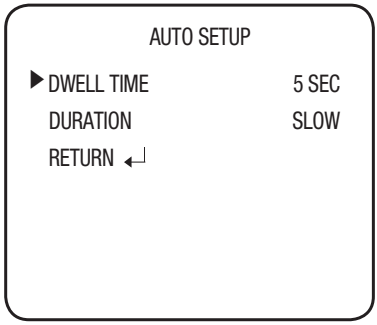
- **DAY/NIGHT** : You can display pictures in color or black and white.

  ❶ When the SETUP menu screen is displayed, select 'DAY/NIGHT' using the Function Setup switch so that the arrow indicates 'DAY/NIGHT'.

  ❷ Select a desired mode using the Function Setup switch according to the picture display you want.



  - **AUTO** : The mode is switched to 'Color' in a normal environment, but switches to 'B/W' mode when ambient illumination is low. To set up the switching time or speed for AUTO mode, press the Function Setup switch.
  - **COLOR** : The picture is always displayed in color.
  - **B/W** : The picture is always displayed in black and white.



  - DWELL TIME : You can select tday/night switching delay time from.
    → 5,7,10,15,20,30,40, 60(sec)
  - DURATION : You can select the day/night switching point(lux).

	Color → B/W	B/W → Color
Fast	2.6Lux	4.2Lux
Slow	1.2Lux	6.0Lux

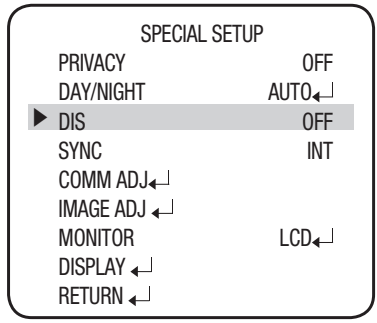
  ✳ When AGC is middle mode.

- **EXT** : This mode allows you to apply a desired filter to external signals.

- You cannot control the DAY/NIGHT menu when AGC in the EXPOSURE menu is 'OFF'. At this time, the exchange between DAY mode and NIGHT mode operates as like selecting 'COLOR' mode.
- The OSD key does not work for 3 seconds when switching to Color or B/W, to ensure stable camera operation.
- The camera may focus less well under infrared illumination than under normal illumination.
- The brightness of illumination is changeable by installed environment.

- **DIS** : The DIS mode can compensate for vibration of the camera.

▪ When DIS is operating, D-ZOOM does not operate.



- **SYNC** : Two synchronization modes are available INTERNAL and EXTERNAL LINE-LOCK.
  In LINE-LOCK mode, it synchronizes the camera's video out signal to the external SYNC signal.
  - INT : Internal synchronization
  - LL : External line-lock synchronization

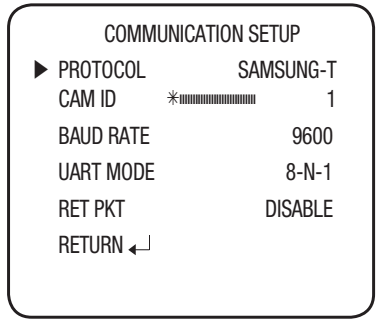
  ❶ If you choose 'LL', you can adjust the desired phase. Press the Function Setup switch.

  ❷ You can adjust the desired phase from 0 to 359.

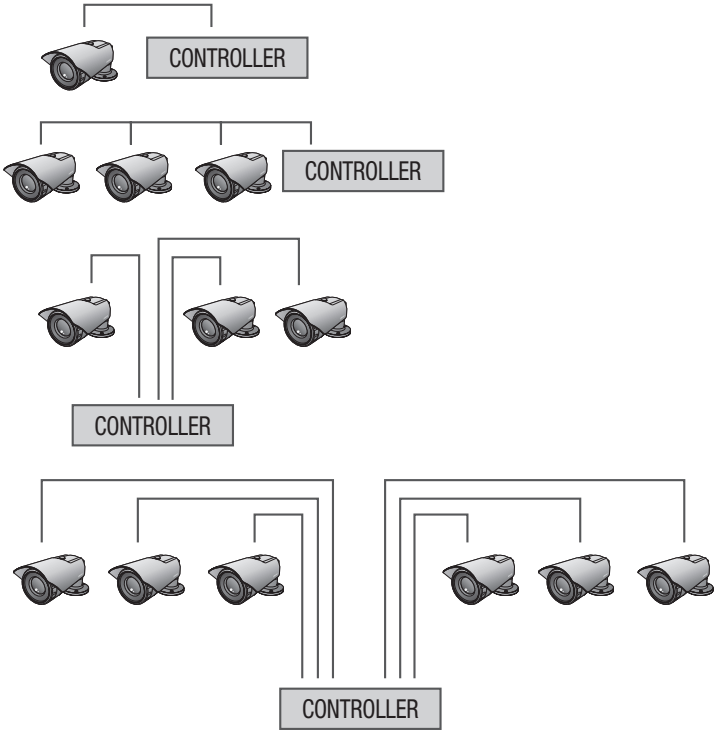
- **COMM ADJ** (Communication Adjustment) : This function sets up the camera communication status when controlling the camera through an external controlled device.

  ❶ When the SPECIAL menu screen is displayed, using the Function Setup switch so that the arrow indicates 'COMM ADJ'.

  ❷ Set up the mode moving the 4 direction of the Function Setup switch.



  - PROTOCOL : Select the communication PROTOCOL. (SAMSUNG-T/PELCO-D/ PELCO-P/ BOSCH/HONEYWELL/VICON/AD/SAMSUNG-E/PANASONIC)
  - CAM ID : Determines the camera's identification number (between 0 and 255).
  - BAUD RATE : You can select 2400/4800/9600/19200/38400/57600 bps.
  - UART MODE : You can select NONE, EVEN or ODD for the parity bits.



- RET PKT : You can choose whether to send an ACK signal when the communication control command is issued to the camera.

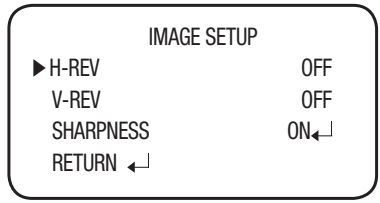
- **IMAGE ADJ** : Includes image quality or special function factors.

  ❶ When the SETUP menu screen is displayed, select 'IMAGE ADJ.' using the Function Setup switch so that the arrow indicates 'IMAGE ADJ.

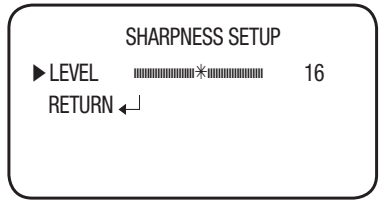
  ❷ Select a desired mode using the Function Setup switch.

SPECIAL SETUP	
PRIVACY	OFF
DAY/NIGHT	AUTO↵
DIS	OFF
SYNC	INT
COMM ADJ↵	
▶ IMAGE ADJ ↵	
MONITOR	LCD↵
DISPLAY ↵	
RETURN ↵	

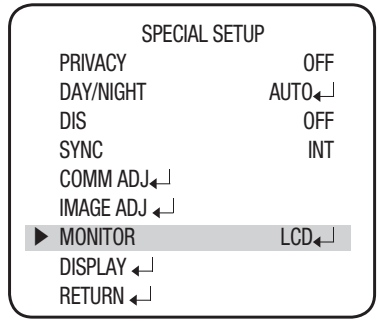
- H-REV : You can flip the picture horizontally on the screen.
- V-REV : You can flip the picture vertically on the screen.
- SHARPNESS : As you increase this value, the picture outline becomes stronger and clearer.



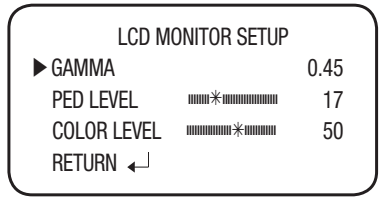
▪ When the SHARPNESS level is too high, video output may be unnatural or noisy.



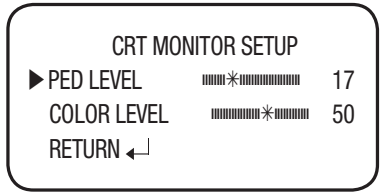
• **Monitor** : Please change the settings value of video appropriate to your monitor.



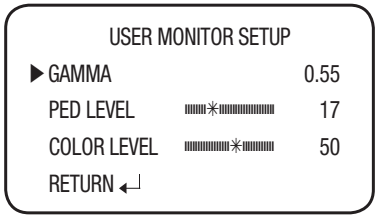
- LCD : Please select this menu item when using an LCD monitor.



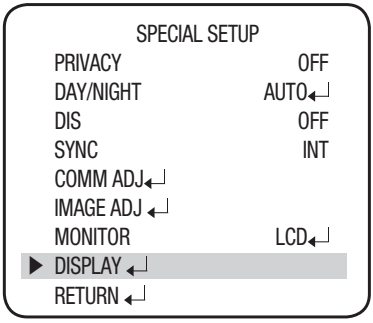
- CRT : Please select this menu item when using a CRT monitor.



- USER : Please use this menu item when using a monitor other than standard ones. You can change the gamma, PED level, and color gain in the sub menus.

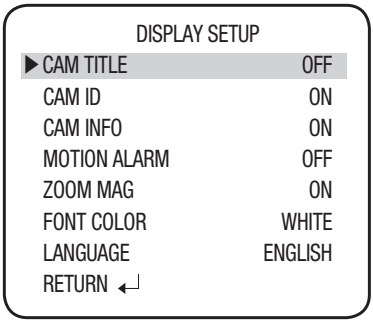


- **DISPLAY** : Use this feature to designate a name for the camera, which will display on the monitor screen.
  - CAM TITLE : If the camera is named, it is displayed on the monitor.



❶ Press the Function Setup switch to display the main setup menu and move the arrow indicator to 'CAM TITLE' using the Function Setup switch.

❷ Set 'CAM TITLE' to 'ON' using the Function Setup switch.



▪ If the CAM TITLE feature is set to 'OFF', the name will not displayed in the monitor

❸ Press the Function Setup switch.

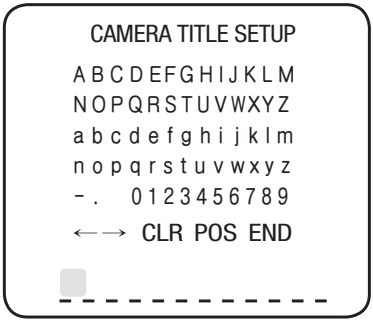
❹ You can enter up to 15 characters.

a. Move the cursor to the character entry field using the Function Setup switch.

b. Use the 4 direction of Function Setup Switch to select a desired character.

c. Press the Function Setup switch to confirm the selection of the blinking character. The character is then saved, and the cursor in the entry field moves to the next position.

d. Repeat steps 'a' through 'c' until the desired name has been entered.



■ Correcting Mistakes

Move the cursor th 'CLR' and press the Function Setup switch to clear the entire entry.
To modify one character, use LEFT or RIGHT to position the cursor above the character to be modified and click the Function Setup switch after selecting the character to enter.

❺ Enter a title, move the cursor to 'POS' and press the Function Setup Switch. The entered title appears on the screen. Select the position to display the title on the screen by moving the 4 direction of Function Setup Switch and press the Function Setup Switch. When the position is determined, select.

- CAM ID : Displays camera ID on top left corner of the screen.
- CAM INFO : Displays camera information on screen.
- MOTION ALARM : You can toggle the use of the camera alarm.
- ZOOM MAG : Use th is feature to display the current zoom magnification level on screen. Position the indicator over 'ZOOM MAG' using the Function Setup switch. Then set to ON using the Function Setup switch.
- FONT COLOR : You can select the font color(white,yellow,green,red,blue)
- LANGUAGE : You can select the menu language according to your requirements.
  - NTSC : Korean, English, French, Spanish, Japanese, Portuguese, Taiwanese
  - PAL : English, French, German, Spanish, Italian, Chinese, Russian, Czech, Polish, Portuguese, Romanian, Serbian, Swedish, Danish, Turkish
- END : Select this to save the SPECIAL menu settings and return to the SPECIAL menu.

RESET

To reset your camera to factory default condition.

EXIT

To finish setup menu.

TROUBLESHOOTING

If the product does not function properly, please see the below for trouble shooting.

PROBLEM	SOLUTION
Nothing appears on the screen.	▶ Check that the power cord and line connection between the camera and monitor are fixed properly. ▶ Check that you have properly connected VIDEO cable to the camera VIDEO output jack.
The image on the screen is dim.	▶ Is lens stained with dirt? Clean your lens with soft, clean cloth. ▶ Set the monitor to proper condition. ▶ If the camera is exposed to too strong light, change the camera position.
The image on the screen is dark.	▶ Adjust the contrast feature of the monitor. ▶ If you have an intermediate device, set the 75Ω / Hi-z properly.
The camera is not working properly, and the surface of the camera is hot.	▶ Check that you have properly connected the camera to an appropriate power source.
The SENS-UP function does not work.	▶ Check that AGC of EXPOSURE SETUP menu is 'OFF'. ▶ Check that SHUTTER of EXPOSURE SETUP menu is 'A.FLK' or 'MANUAL'.
The Motion Detection function does not work.	▶ Check that MOTION DET of SPECIAL SETUP menu is 'OFF'.
Color is not correct.	▶ Check the setting of WHITE BAL SETUP menu .
The screen flickers continually.	▶ Check that direction of camera turns toward the Sun.
When coaxial communication is not available:	▶ Make sure that the camera and monitor are installed within the recommended distance. ▶ Use the video amplifier equivalent to coaxitron if the recommended installation distance is exceeded.

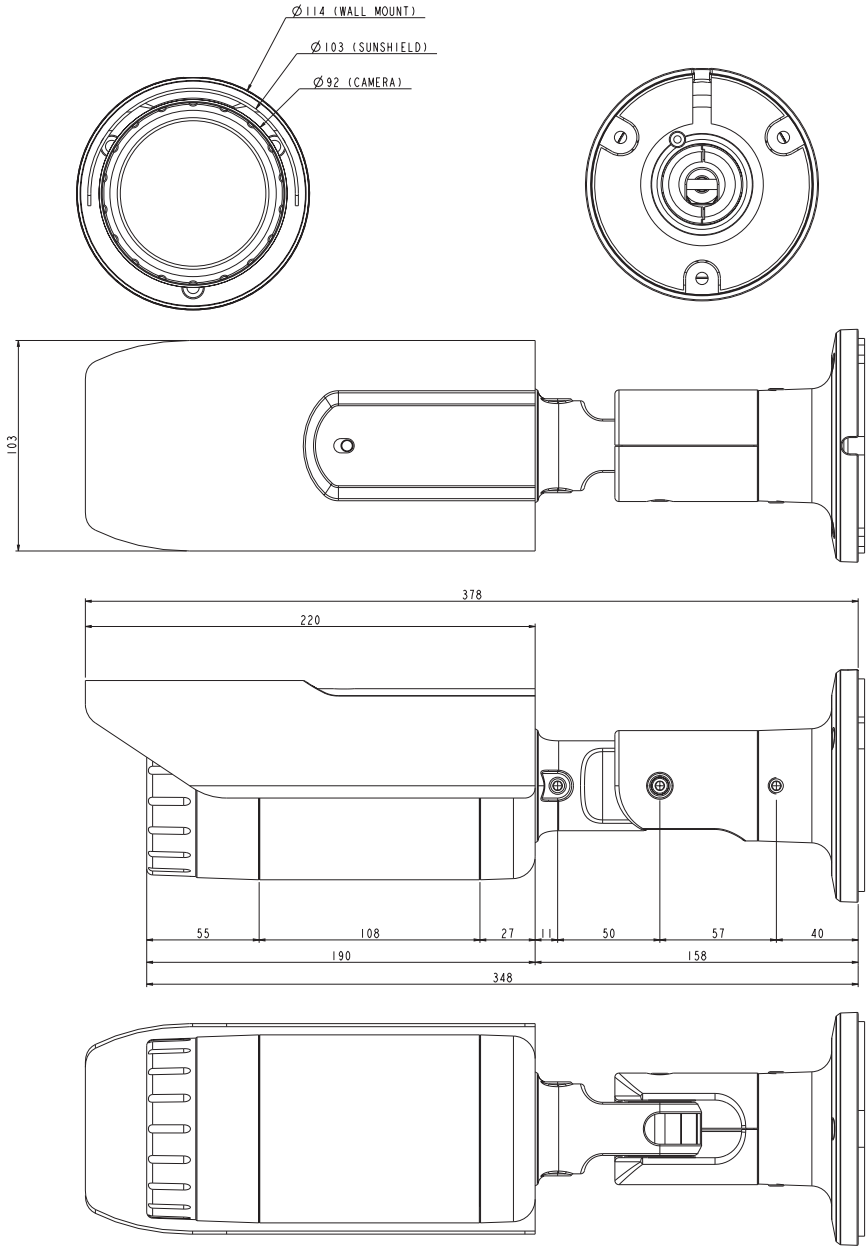
SPECIFICATIONS

	SCO-2370N	SCO-2370P
Video		
Imaging Device	1/4" Exview HAD CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	2 : 1 Interlace	
Synchronization	Internal / Line Lock	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600 TV lines, B/W : 700 TV lines	
Min. Illumination	Color : 0.2Lux @ F1.2 (50IRE), 0.0004 Lux (Sens-up, 512x) B/W : 0.02 Lux @ F1.2 (50IRE), 0.00004 Lux (Sens-up, 512x)	
S / N Ratio	52dB (AGC off, Weight on)	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
Lens Type		
Focal Length (Zoom Ratio)	3.5~129.5mm (Optical 37x)	
Max. Aperture Ratio	1:1.6 (Wide) ~ 3.9 (Tele)	
Angular Field of View	H : 55.5°(Wide) ~ 1.59°(Tele) / V : 42.5°(Wide) ~ 1.19°(Tele)	
Min. Object Distance	1.5m	
Focus Control	Auto / Manual / One AF	
Zoom Movement Speed	2.8 sec (Wide to Tele)	
Operational		
On Screen Display	Multi-language Support English, Japanese, Spanish, French, Portuguese, Taiwanese, Korean	Multi-language Support English, French, German, Spanish, Italian, Chinese, Russian, Polish, Czech, Romanian, Serbian, Swedish, Danish, Turkish, Portuguese
Camera Title	Off / On (Displayed 15 characters)	
Day & Night	Auto (ICR) / External / Color / B/W	
Backlight Compensation	Off / BLC / HLC	
Contrast Enhancement	SSDR (Off/On)	
Digital Noise Reduction	SSNR Ⅲ (Off/On)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (8 programmable zones)	
Privacy Masking	Off / On (12 programmable zones)	
Sens-up (Frame Integration)	2x ~ 512x	

	SCO-2370N	SCO-2370P
Gain Control	Off / Low / Medium / High / Manual	
White Balance	ATW / Outdoor / Indoor / Manual / AWC (1,700K° ~ 11,000K°)	
Electronic Shutter Speed	1/60 ~ 1/120,000 sec	1/50 ~ 1/120,000 sec
Digital Zoom	Off / On (1x ~ 16x)	
Flip / Mirror	Off / On	
Alarm	1 Out	
Communication	Coaxial Control (SPC-300 Compatible), RS-485	
Protocol	Coax : Pelco-C (Coaxitron) RS-485: Samsung-T, Samsung-E, Pelco-D, Pelco-P, Panasonic, Bosch, Honeywell, Vicon, AD	
Environmental		
Operating Temperature / Humidity	-50°C ~ +50°C (+14°F ~ +122°F) / Less than 90% RH	
Ingress Protection	IP68	
Electrical		
Input Voltage/Current	Dual (24VAC±10% & 12VDC±10%)	Dual (24VAC±10% & 12VDC±10%)
Power Consumption	Max. 28W(Fan & Heater On, AC 24V)	
Mechanical		
Color / Material	Body : Dark Gray, Aluminum	
Dimension (WxHxD)	103 x 114 x 378mm	
Weight	1.95Kg	

✳ **The specification for this product may change without prior notice for product improvement.**

DIMENSION


Ø114 (WALL MOUNT)
Ø103 (SUNSHIELD)
Ø92 (CAMERA)
103
378
220
55
108
27
11
50
57
40
190
158
348

MEMO

STW PROTOCOL COMMAND DESCRIPTION

Command Name		Byte1	Byte2	Byte3	
	Command Packet	STX	CAM ID	HOST ADDR	
	Return Packet	STX	CAM ID	HOST ADDR	
	Checksum	CHECKSUM CALCULATION : UNARY OPERATION OF SUMMATION FROM BYTE2 TO BYTE9. EX) CHECKSUM = ~(BYTE2+BYTE3+... +BYTE8+ BYTE9);			
Reset	Function	Reset all data to factory default value.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
Focus Far	Function	Move focus lens to far direction.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
Focus Near	Function	Move focus lens to near direction.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
Zoom Wide	Function	Move zoom lens to wide direction.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
Zoom Tele	Function	Move zoom lens to tele direction.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	

B yte4 ll Byte5	Byte 6	Byte7	Byte8	Byte9	Byte10	Byte11
CAMMAND	DATA3	DATA4	DATA5	DATA6	ETX	CHECKSUM
CAMMAND	DATA3	DATA4	DATA5	DATA6	ETX	CHECKSUM
000Fh	00h	00h	00h	00h	AFh	CHECK SUM
000Fh	00h	00h	00h	00h	AFh	CHECK SUM
0100h	00h	00h	00h	00h	AFh	CHECK SUM
0100h	00h	00h	00h	00h	AFh	CHECK SUM
0200h	00h	00h	00h	00h	AFh	CHECK SUM
0200h	00h	00h	00h	00h	AFh	CHECK SUM
0040h	00h	00h	00h	00h	AFh	CHECK SUM
0040h	00h	00h	00h	00h	AFh	CHECK SUM
0020h	00h	00h	00h	00h	AFh	CHECK SUM
0020h	00h	00h	00h	00h	AFh	CHECK SUM

STW protocol command description

ZOOM Direct	Function				
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
	Parameter	P1, P2 : OPTICAL ZOOM = 0000h~06EAh P3 : DIGITAL ZOOM = ((256*10)/Ratio)-1 EX) D-ZOOM 1.1x : P3 = E7h = ((256*10)/11)-1, Ratio 11 me ans 1.1x. D-ZOOM 2.0x : P3 = 7Fh = ((256*10)/20)-1, Ratio 20 me ans 2.0x.			
AF Stop	Function	Stop zoom & focus lens moving.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
One push AF	Function	Unconditionally execute auto focus.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
User Preset Save	Function	Save current user preset configuration information.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
	Parameter	P1:00h(USER PRESET 1) ~ 80h(USER PRES ET 128)			
User Preset Exec.	Function	Execute selected user preset.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
	Parameter	P1:00h(USER PRESET 1) ~ 80h(USER PRES ET 128)			
User Preset Clear	Function	Clear selected user preset.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
	Parameter	P1:00h(USER PRESET 1) ~ 80h(USER PRES ET 128)			

00FFh	P1	P2	P3	00h	AFh	CHECK SUM
00FFh	P1	P2	P3	00h	AFh	CHECK SUM

0000h	00h	00h	00h	00h	AFh	CHECK SUM
0000h	00h	00h	00h	00h	AFh	CHECK SUM

0045h	00h	00h	00h	00h	AFh	CHECK SUM
0045h	00h	00h	00h	00h	AFh	CHECK SUM

0003h	P1	00h	00h	00h	Afh	CHECK SUM
0003h	P1	00h	00h	00h	Afh	CHECK SUM

0007h	P1	00h	00h	00h	Afh	CHECK SUM
0007h	P1	00h	00h	00h	Afh	CHECK SUM

0005h	P1	00h	00h	00h	Afh	CHECK SUM
0005h	P1	00h	00h	00h	Afh	CHECK SUM

STW protocol command description

OSD Menu On/Off	Function	Display OSD menu on the screen. Clear OSD menu and save current menu setup.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
	Parameter	P1 : 00h = ON 01h = OFF			
OSD Menu Up	Function	Move OSD arrow to up.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
OSD Menu Down	Function	Move OSD arrow to down.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
OSD Menu Left	Function	Move OSD arrow to left.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
OSD Menu Right	Function	Move OSD arrow to right.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
OSD Menu Set	Function	Move to inside menu			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
OSD Menu ESC	Function	Move to upper menu.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	

00B1h	P1	00h	00h	00h	Afh	CHECK SUM
00B1h	P1	00h	00h	00h	Afh	CHECK SUM

0008h	00h	00h	00h	00h	AFh	CHECK SUM
0008h	00h	00h	00h	00h	AFh	CHECK SUM
0010h	00h	00h	00h	00h	AFh	CHECK SUM
0010h	00h	00h	00h	00h	AFh	CHECK SUM
0004h	00h	00h	00h	00h	AFh	CHECK SUM
0004h	00h	00h	00h	00h	AFh	CHECK SUM
0002h	00h	00h	00h	00h	AFh	CHECK SUM
0002h	00h	00h	00h	00h	AFh	CHECK SUM
0100h	00h	00h	00h	00h	AFh	CHECK SUM
0100h	00h	00h	00h	00h	AFh	CHECK SUM
0200h	00h	00h	00h	00h	AFh	CHECK SUM
0200h	00h	00h	00h	00h	AFh	CHECK SUM

DECLARATION OF CONFORMITY

Application of Council Directive(s)	2004 / 108 / EC
Manufacturer's Name	SAMSUNG TECHWIN CO., LTD
Manufacturer's Address	SAMSUNG TECHWIN CO., LTD
	42, SUNGJU-DONG CHANGWON-CITY,
	KYUNGNAM, KOREA, 641-716
European Representative Name	
European Representative Address	
Equipment Type/Environment	CCTV Camera
Model Name	SC0-2370P
Beginning Serial NO.	C54N6V3Z300001X
Year of Manufacture	2010.03.24
Conformance to	EN 55022 : 2006
	EN 50130-4 : 2003

We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

Manufacturer	SAMSUNG TECHWIN CO., LTD	Legal Representative in Europe
Signature	BJ Gu	Signature
Full Name	BONJENG GU	Full Name
Position	QUALITY CONTROL MANAGER	Position
Place	CHANGWON, KOREA	Place
Date	2010.03.24	Date

MEMO

MEMO

MEMO

MEMO

MEMO

SALES NETWORK

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